

EXHIBIT 15

In the Cage: MMA Fighters' Experience of Competition

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Mixed Martial Arts (MMA) is a relatively new and rapidly growing sport within contemporary athletics yet, to date, it has received relatively little attention in the sport psychology literature. To shed more light on the sport, the aim of the current study was to examine the experiences of MMA fighters during sanctioned competitions. Audio-recorded phenomenological interviews were conducted with seven participants and the transcripts were qualitatively analyzed to identify emerging themes. The findings revealed that the most important aspect of fighters' experience was the chaotic nature of MMA fights, which participants characterized as "cage reality." The results also suggested that fighters' arousal regulation skills are at least as important as their technical skills for performance success. Taken together, the present findings extend previous research on MMA and suggest several implications for sport psychology consultants interested in working with fighters.

Mixed Martial Arts (MMA) is a sport involving intense combat between two opponents who use a variety of fighting techniques, including classic martial art systems, boxing, and wrestling. MMA is classified as a combat sport because competitors win a contest by subduing their opponents within an established set of regulations (Gauthier, 2009). The sport originated in 1993 when the Ultimate Fighting Championship (UFC) series was held to determine which of the possible unarmed fighting systems was superior (Walter, 2003). As the sport increased in popularity most fighters began to employ and integrate multiple fighting systems, thus producing the name MMA (Walter, 2003). MMA athletes are referred to as "fighters." During a fight competitors can engage each other like boxers or martial artists, punching and kicking, or like wrestlers grappling on the mat. A fighter can win a match in four ways: by forcing the opponent to submit ("tap out"), by rendering the opponent unconscious ("knock out"), by prompting the referee to stop the fight ("technical knockout"), or by achieving more points than the opponent based on the judges' decision (New Jersey State Athletic Control Board, 2002). The prevalence of injury during MMA competition appears consistent with the culture of injury reported in previous studies of athletes in other sports such as women's rowing, rugby, and Australian football (Grange & Kerr, 2010; Howe, 2001; Pike & Maguire, 2003). Getting hit by an opponent is a normal part of MMA competition and

injury rates are on par with those in professional boxing (Bledsoe, Hsu, Grabowski, Brill & Li, 2006). Approximately 40% of MMA matches end due to a fighter being injured (Bledsoe et al., 2006; Buse, 2005).

While relatively little research in sport psychology has examined the sport of MMA, a few studies (Downey, 2007; Harpold, 2008; Milton, 2004a; Milton, 2004b; Spencer, 2009) have provided some insights into the competitive experience of fighters. Downey's (2007) anthropological study examined the birth and evolution of fighting techniques in MMA as well as the personal significance of competition to fighters. In its most elemental form MMA competition is an opportunity for participants to test their fighting skills (Downey, 2007). However, far from being a mere brawl or primal thrashing between combatants, MMA competition is a highly technical endeavor requiring superior levels of skill and conditioning to achieve consistent success (Downey, 2007). In addition, since the sport's inception the rules have evolved, forcing competitors to continually change their tactics, experiment with various fighting techniques, and sharpen their decision-making capabilities (Downey, 2007). Therefore, sanctioned MMA competitions represent the ultimate challenge for most competitors and, for some, the apex of their MMA experience.

To examine MMA fighters' preparation for competition, Spencer (2009) conducted a participant-as-observer ethnography supplemented by semistructured qualitative interviews. His observations led Spencer (2009) to comment that, "The chaos of the fight, the sheer magnitude of the event is experientially inscribed upon the fighter and....endows the fighter with a unique experiential knowledge that only s/he can comprehend" (p. 136). Clearly, the preparation of MMA fighters appears to emphasize the importance of participation in competition as much or more than any other sport. Only after

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Wacquant, 1995), the current participants said their affection for MMA was primarily, if not entirely, centered on the competition experience. The metaphoric language they used, comparing MMA competition to warfare and insisting that a fighter must possess incredible perseverance in the face of potentially severe injury, represent additional extensions to the experiences of combat sport athletes reported in previous literature (Downey, 2007; Spencer, 2009; Wacquant, 1995).

Finally, the lower-order theme, *outside the cage*, appeared to be another unique aspect of the current study. For these participants, the audience in general and significant others in particular influenced their precompetition thoughts and feelings, which in some cases carried over to their performance. However, once competition began, most reported little awareness of anything going on outside the cage. This was likely due to efforts on the fighters' part to narrow their focus of attention almost totally on the opponent, although in some cases they mentioned hearing the voice of their coach or corner man providing tactical assistance or emotional support *in situ*.

Limitations

In should be noted that there were several limitations to the current study. Since only four of the seven participants had competed professionally within MMA, it is possible that the experiences of these fighters are different from those that compete at the most elite MMA levels, such as the Ultimate Fighting Championship (UFC) league. In addition, all of the participants in this study were males and citizens of the United States. Thus, it is possible that their experiences may not be the same as those of females or fighters from other countries. Overall, the findings should not be considered generalizable to the larger MMA population, due among other things to the limited age range and gender of participants. However, the rich and in-depth descriptions of the participants represent initial insights into the possible mental and emotional demands of the sport.

Recommendations for Future Research

The findings of the current study suggest several potentially fruitful lines of future research with MMA participants. First, it would be beneficial to learn more about the experiences of fighters representing different levels of competition, from beginning to the most elite. Second, since MMA fighters spend the vast majority of their time in training for fights, it would be informative to examine the nuances of their training experience. Recent research with professional boxers (Simpson, 2009) suggests that the training experience has its own constellation of personal and professional challenges. A similar study with MMA fighters would possibly provide important insights into the broader lives of MMA fighters. Third, since most MMA participants, including the fighters in the current study, enter the sport from a previous background in

other combat sports (e.g., boxing, judo, wrestling), it would be interesting to examine the developmental transitions made by MMA athletes during the course of their careers (c.f., Alferman & Stambulova, 2007; Wylleman & Lavallee, 2004).

Practical Implications.

The present findings suggest several possible applications for MMA fighters, coaches, and sport psychology consultants. The higher-order theme of *cage reality* suggests that simulations of the intensity of actual competition may be difficult during training. However, any activities that provide fighters with the opportunity to enhance the rapidity with which they are able to adapt their strategies and actions to the chaotic competitive MMA environment would likely be beneficial. The use of a random practice schedule that challenges fighters' ability to read and react to a variety of possible situations (Schmidt & Wrisberg, 2008) might be beneficial. The results also suggest that arousal regulation skills may be as important as technical fighting skills and tactical decision making for success in competition. Thus, coaches and consultants might provide helpful assistance for MMA fighters by encouraging them to assess changes in their arousal during training sessions and exploring various strategies for raising or lowering arousal in response to the ever-changing demands of a competition. Coaches and consultants might also increase fighters' awareness of the ways physical events of a match (e.g., getting hit), perceptions of the opponent, and pre-competition connections to the crowd can impact their arousal level and help them prepare effective responses to such occurrences.

Conclusions

Based on the results of this study it might be concluded that the competition experiences of these MMA fighters are characterized by extremely intense and chaotic struggles with opponents they respect. Such experiences are fraught with numerous fears that represent a significant departure from the world of everyday life. For these participants, MMA competition represents an opportunity to evaluate not only their fighting skills, but to measure their mental and emotional toughness in competition. Finally, the results suggest that while MMA fighters face challenges that are similar to those of other combat sport athletes (e.g., arousal regulation, need for automated skills) there may be dimensions that are unique to their competitive experience (e.g., the combination of complexity and chaos).

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